

## CLAIMS

[0039] We claim:

1. A method comprising:
    - comparing a first packet error rate for transmissions without request to send protection with a second packet error rate for transmissions with request to send protection; and
    - adjusting transmission parameters if said first packet error rate is not attributable to collisions.
  2. A method as in claim 1, comprising setting said request to send protection to a predefined upper limit.
  3. A method as in claim 2, comprising reducing said predefined upper limit of said request to send protection if transmitting with said predefined upper limit causes packet error rates attributable to collisions.
  4. A method as in claim 1, comprising:
    - collecting a packet error rate of request to send packets; and
    - collecting a packet error rate of data frames transmitted with request to send protection.
  5. A method as in claim 1, comprising adjusting a data rate if said first packet error rate is not attributable to collisions.
  6. A method as in claim 1, comprising activating fragmentation if said first packet error rate is not attributable to collisions.
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7. A method as in claim 1, comprising:
    - collecting a packet error rate of frames transmitted without said request to send protection; and
    - collecting a packet error rate of frames transmitted with said request to send protection.
  8. A method as in claim 1, comprising deactivating said request to send protection if said first packet error rate is not attributable to collisions.
  9. A method comprising:
    - activating request to send protection;
    - calculating a first packet error rate of request to send frames;
    - calculating a second packet error rate of data frames sent under request to send protection; and

adjusting request to send protection if said first packet error rate is below a collision rate threshold.

10. A method as in claim 9, wherein said activating request to send protection comprises setting request to send protection to predefined upper limit.

11. A method as in claim 9, comprising adjusting a transmission parameter according to said second packet error rate if said first packet error rate is below a collision rate threshold.

12. A method as in claim 11, wherein said adjusting a transmission parameter comprises:

determining whether transmission quality is above a transmission quality threshold;

and

increasing a data rate.

13. A method as in claim 12, including:

determining whether a transmission quality is below a transmission quality threshold;

and

decreasing a data rate.

14. A method as in claim 11, wherein said adjusting a transmission parameter comprises adjusting a data rate.

15. A method as in claim 11, wherein said adjusting a transmission parameter comprises adjusting fragmentation.

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16. A method as in claim 9, wherein said adjusting request to send protection comprises deactivating said request to send protection.

17. A method as in claim 9, further comprising:

calculating a third packet error rate for data frames sent without request to send protection;

deriving a fourth packet error rate attributable to noise; and

adjusting a transmission parameter based on said fourth packet error rate.

18. A method as in claim 17, wherein deriving said fourth packet error rate attributable to noise comprises:

dividing the result of

a fifth packet error rate of transmissions without request to send protection minus said first packet error rate of request to send frames, by, one minus said first packet error rate of request to send frames.

19. An article comprising a storage medium having stored thereon instructions that, when executed by a processor, result in:

comparing a first packet error rate of transmissions without request to send protection with a second packet error rate of transmissions with request to send protection; and  
adjusting a data rate if said first packet error rate is not due to collisions.

20. An article as in 19, wherein said instructions further result in setting said request to send protection to a maximal level.

21. An article as in 19, wherein said instructions further result in adjusting a fragmentation size if said first packet error rate is not due to collisions.

22. A communication device comprising:

a dipole antenna to transmit frames;  
a comparator to compare a first packet error rate of transmissions without request to send protection with a second packet error rate for transmissions with request to send protection; and  
an adjustor to adjust a data rate if said first packet

~~error rate is not due to collisions.~~

23. A communication device as in claim 22, wherein said adjustor is to adjust a fragmentation if said first packet error rate is not due to collisions.

24. A communication device as in claim 22, wherein said adjustor is to adjust request to send protection levels if said first packet error rate is due to collisions.

25. A device comprising:

a comparator to compare a first packet error rate for transmissions without request to send protection with a second packet error rate for transmissions with request to send protection; and  
an adjustor to adjust a data rate if said first packet error rate is not due to collisions.

26. A device as in claim 25, wherein said adjustor sets said request to send protection to a maximal level.

27. A device as in claim 26, wherein said adjustor reduces said level of said request to send protection if transmitting with said maximal level causes packet error rates attributable to collisions.

28. A device as in claim 25, wherein said comparator is to:

collect a packet error rate for request to send packets; and

collect a packet error rate for data frames transmitted with request to send protection.

29. A device as in claim 25, wherein said adjustor is to adjust a data rate if said first packet error rate is not attributable to collisions.

30. A device as in claim 25, wherein said adjustor is to activate fragmentation if said first packet error rate is not attributable to collisions.

31. A communication system comprising:

a station;

an access point;

a comparator to compare a first packet error rate for transmissions without request to send protection with a second packet error rate for transmissions with request to send protection; and

an adjustor to adjust a data rate if said first packet error rate is not due to collisions.

32. A device as in claim 30, wherein said adjustor sets said request to send protection to an elevated level.

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~~33. A device as in claim 32, wherein said adjustor reduces said level of said request to~~  
send protection if transmitting with said elevated level causes packet error rates attributable to collisions.